

Remarks

This is responsive to the Office Action mailed July 26, 2005. The amendments and remarks are proper, do not introduce new matter, do not require additional searching, are not narrowing in view of a prior art rejection, and place the claims in condition for allowance or in better condition for appeal.

Entry of Amendments

The amendments herein are proper in that they obviate all rejections by more particularly pointing out and distinctly claiming the present embodiments as comprising an airstream stripper downstream of the actuator in combination with a disc edge damper located upstream of and intersecting the airstream stripper. The amendments advance the case on the merits notwithstanding the Examiner's unreasonable claim construction reading the load/unload cam 33 of Schirle '545 on the airstream stripper of the present embodiments.

Objection to Claims

Claims 3, 19, and 24 were objected to for informalities listed in paragraph 2. (Office Action of 7/26/2005, pg. 2) The claims have been amended to obviate these objections. Reconsideration and withdrawal of the objection are respectfully requested.

Rejection Under 35 USC 112 Second Paragraph

Claims 15-17 and 19 were rejected as being indefinite. These claims have been amended to obviate the rejection. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 USC 102(b)

Claims 20-23 were rejected as being anticipated by Westwood '997. This rejection is respectfully traversed.

Claim 20

Westwood '997 cannot sustain a Section 102 rejection of claim 20 because it fails to identically disclose the *means for limiting the aerodynamic excitation* of the present embodiments as claimed.

The *means for limiting* element of claim 20 invokes 35 U.S.C. §112, sixth paragraph. Accordingly, the Examiner is obliged to construe the means clause as covering the disclosed structure and equivalents thereof performing the identical function of the claimed embodiments. See *B. Braun Medical, Inc. v. Abbott Lab.*, 43 USPQ2d 1896, 1900 (Fed. Cir. 1997); *In re Donaldson Co. Inc.*, 26 USPQ2d 1845 (Fed. Cir. 1994)(*en banc*); *In re Dossel*, 42 USPQ2d 1881 (Fed. Cir. 1997); *Supplemental Examination Guidelines for Determining the Applicability of 35 U.S.C. 112, Para. 6*, 65 FR 38510. A failure to do so is reversible error.

The Applicant has explicitly identified the function associated with the recited *means for limiting* as being laminarizing the fluid flow so as to attenuate the otherwise turbulent forces that can be imparted either to the actuator or to the disc by the airstream currents produced by disc rotation. See, for example:

Turbulence can impart adverse vibrations, or aerodynamic excitation, to the discs (flutter) and/or to the actuator, particularly to the suspension members (buffeting). Turbulence can also be created by shedding vortices formed from the actuator wake as the airstream flows past the actuator, and also acting on the disc

edges as the air currents are expelled from the disc stack. Further, wake excitation from the actuator increases disc vibration.

(specification page 2 beginning at line 7, emphasis added)

The disclosed structure performing this function generally is the airstream stripper and the disc edge damper formed by the shroud with fins disposed coextensively to the discs.

See, in relation to the airstream stripper, for example:

the vanes 142 reduce aerodynamic excitation effects of the air currents on the actuator 112. For example, the vanes 142 decrease the Reynolds shear stresses acting on the actuator 112 by decelerating the air current mean flow. Also, the vanes 142 act in the manner of a flow straightener device, substantially like a honeycomb device, to establish fully developed air current flow conditions, thereby suppressing the three-dimensional wake formed downstream of the actuator 112.

(specification page 7 beginning at line 14, emphasis added)

See also, in relation to the disc edge damper, for example:

The expelled air currents, as indicated by the reference arrows in FIG. 11, are thus diverted from the disc 108 to reduce the effects of shedding vortices. This reduces the aerodynamic excitation effects of the air currents on the discs 108.

(specification page 10 beginning at line 8, emphasis added)

Accordingly, the disclosed structure both decelerates the flow at the head and diverts the flow away from the disc edge. The Examiner cited Westwood '997 which is wholly silent regarding any structure capable of attenuating excitation acting on the head and disc, as in the present embodiments as claimed. In Westwood '997, for instance, the vane 64 does not attenuate aerodynamic excitation acting on the head; rather, it moves an actuator latch. Particularly, the vane 64 is located far enough away from the head that it is inherently

incapable of decelerating the flow with respect to the head. Westwood '997 is furthermore wholly silent regarding a disc edge damper for diverting the fluid flow away from the disc edge.

When the means element is properly construed, it is clear that Westwood '997 does not disclose or suggest any structure capable of the identical function as the present embodiments as claimed. Accordingly, independent claim 20 is allowable over the art of record. Reconsideration and withdrawal of the rejection of claim 20 are respectfully requested.

Claims 21-23

These claims have been canceled solely to more particularly point out and distinctly claim the subject matter of independent claim 20 after final rejection, thereby placing claim 20 in better form for allowance or appeal. Withdrawal of the rejection of claims 21-23 is respectfully requested.

Rejection Under 35 USC 102(e)

Claims 20-23 were rejected as being anticipated by Hashizume '119. This rejection is respectfully traversed.

Claim 20

Hashizume '119 cannot sustain a Section 102 rejection of claim 20 because it fails to identically disclose the *means for limiting the aerodynamic excitation* of the present embodiments as claimed. As discussed above, the disclosed structure associated with the claimed function provides both the airstream stripper and the disc edge damper. Particularly, Hashizume '119 is wholly silent regarding the disc edge damper.

When the means element is properly construed, it is clear that Hashizume '119 does not disclose or suggest any structure capable of the identical function as the present embodiments as claimed. Accordingly, independent claim 20 is allowable over the art of record. Reconsideration and withdrawal of the rejection of claim 20 are respectively requested.

Rejection Under 35 USC 102(b)

Claims 1-4, 8-9, 13-15, and 19-24 were rejected as being anticipated by Schirle '545. This rejection is respectfully traversed.

Claim 1

Schirle '545 cannot sustain a Section 102 rejection because it fails to identically disclose all the features of claim 1 which include at least:

An airstream conditioning apparatus...comprising an airstream stripper downstream of the actuator...and extending adjacent the data storage surface from an outermost radial portion of the data storage surface to an inner radial portion of the data storage surface....
(excerpt of amended claim 1, emphasis added)

Claim 1 as previously presented was allowable over Schirle '545, which is wholly silent regarding the recited *airstream stripper* feature. The Examiner's reading Schirle '545's load/unload cams 33 onto the recited *airstream stripper* is an unreasonably broad claim construction because it ignores both plain meaning and the explicit definition in the specification of the claim term. *In re Morris*, 43 USPQ2d 1753 (Fed. Cir. 1997). Particularly, the cams 33 are used for loading/unloading the head, meaning they do not even extend so far as to be adjacent to the data storage portion of the disc. Rather, the cams liftably engage the heads at an outer diameter guard band portion of the disc for parking the

heads. If the cams 33 encroached into the data storage space then they would lift the heads away from the disc there, preventing the intended data transfer relationship between the head and the disc.

Because the cams 33 do not extend radially across the data storage space of the disc, they are inherently incapable of decelerating the fluid flow around the head when it is operably transferring data. Contrarily, the cams 33 actually disrupt fluid flow in the area of the head, creating turbulence rather than attenuating it.

Nevertheless, and solely in order to place claim 1 in better condition for allowance or appeal, claim 1 has been amended in order to more particularly point out and distinctly claim *the airstream stripper downstream of the actuator...and extending adjacent the data storage surface from an outermost radial portion of the data storage surface to an inner radial portion of the data storage surface*. This more clearly distinguishes the present embodiments over Schirle '545, which is wholly silent regarding an airstream stripper extending adjacent the data storage surface.

Accordingly, Schirle '545 cannot sustain the Section 102 rejection of claim 1 because it fails to identically disclose all the features of the present embodiments as claimed. Reconsideration and withdrawal of the present rejection of claim 1 and the claims depending therefrom are respectfully requested.

Claim 15

Schirle '545 cannot sustain a Section 102 rejection of claim 15 because it fails to identically disclose all the features which include at least the following:

A disc drive, comprising...an airstream conditioning apparatus supported by the enclosure comprising an

airstream stripper...extending adjacent the data storage surface from an outermost radial portion of the data storage surface to an inner radial portion of the data storage surface....

(excerpt of amended claim 15, emphasis added)

For the reasons discussed above, claim 15 as previously presented was allowable over Schirle '545 which is wholly silent regarding the recited *airstream stripper* feature; that is, the Examiner's reading Schirle '545's load/unload cams 33 onto the recited *airstream stripper* is an unreasonably broad claim construction. *In re Morris*. Nevertheless, and solely in order to place claim 15 in better condition for allowance or appeal, claim 15 has been amended in order to more particularly point out and distinctly claim the *airstream stripper... extending adjacent the data storage surface from an outermost radial portion of the data storage surface to an inner radial portion of the data storage surface*. This more clearly distinguishes the present embodiments over Schirle '545, which is wholly silent regarding an airstream stripper extending adjacent the data storage surface.

Accordingly, Schirle '545 cannot sustain the Section 102 rejection of claim 15 because it fails to identically disclose all the features of the present embodiments as claimed. Reconsideration and withdrawal of the present rejection of claim 15 and the claims depending therefrom are respectfully requested.

Claim 20

Schirle '545 cannot sustain a Section 102 rejection of claim 20 because it fails to identically disclose the *means for limiting the aerodynamic excitation* of the present embodiments as claimed. As discussed above, the disclosed structure associated with the claimed function provides both the airstream stripper and the disc edge damper. Also as

discussed above, the load/unload cams 33 of Schirle '545 cannot reasonably be read as anticipating the airstream stripper of the present embodiments. This is because, at the least, they do not extend to the data storage space of the disc where the attenuation is directed, but rather they actually create turbulence around the head and supporting structure in the area of the outer data storage tracks.

When the means element is properly construed, it is clear that Schirle '545 does not disclose or suggest any structure capable of the identical function as the present embodiments as claimed. Accordingly, independent claim 20 is allowable over the art of record. Reconsideration and withdrawal of the rejection of claim 20 are respectively requested.

Rejection Under 35 USC 103(a)

Claims 15-17 were rejected as being unpatentable over Hashizume '119 in view of Izumi '038. This rejection is respectfully traversed.

The Applicant agrees with the Examiner's finding that Hashizume '119 is deficient in not disclosing the shroud of the present embodiments. The Applicant also agrees with the Examiner's implicit finding that there is no motivation from the cited references leading a skilled artisan to modify and combine the disclosures of Hashizume '119 and Izumi '038 to arrive at the present embodiments as claimed; rather, the Examiner rather relies on the motivation as being within the knowledge of the skilled artisan.

However, both the grooved annular member 33 of Izumi '038 and the wing 6 of Hashizume '119 are disclosed only as being located within the shrouded portion of the disc; that is, only within the peripheral portion of the spinning disc where there is a close mating relationship between the enclosure and the disc. The cited references do not, alone or in

combination, disclose or suggest a disc edge damper in the opening in the peripheral shroud through which the actuator rotates in moving radially across and away from the disc.

The most likely place for disc flutter to occur is in the opening in the peripheral shroud where the outwardly spiraling airflow is not constrained by the shroud. More particularly, this airflow is most likely to become turbulent at the leading edge of the airstream stripper (wing 6 of Hashizume '119).

Where the cited references are wholly silent regarding placing a disc edge damper in the shroud opening, the Examiner asserts that a skilled artisan would, after viewing the cited references, be motivated to modify the wing 6 of Hashizume '119 to include a disc edge damper like that of the annular member 33 of Izumi '038. However, there is no evidentiary basis in the record establishing that such a modification, with the disc edge damper not in the shroud opening, would yield the same advantages as the present embodiments as claimed. The Examiner has not established the requisite prima facie case of obviousness because there is lacking the sufficient expectation of success in combining the cited disclosures without undue experimentation.

However, solely in order to more particularly point out and distinctly claim the subject matter of the present embodiments, the Applicant has amended claim 15 so that it, like claim 1, explicitly recites the shroud being disposed upstream of and intersecting the airstream stripper. This amendment distinguishes over the cited combination of references, at least because Izumi '038 is wholly silent regarding a disc edge damper upstream of the wing 6 of Hashizume '119 where clearance is provided in the base deck for moving the actuator.

The cited references do not, alone or in combination, disclose or suggest all the features of the present embodiments as claimed. Reconsideration and withdrawal of the present rejection of claim 15 and the claims depending therefrom are respectfully requested.

Rejection Under 35 USC 103(a)

Claim 12 was rejected as being unpatentable over Schirle '545 in view of Tadepalli '934. This rejection is respectfully traversed because claim 12 is allowable as depending from an allowable independent claim, for reasons above, and providing additional limitations thereto. Reconsideration and withdrawal of the present rejection of claim 12 are respectfully requested.

Allowable Subject Matter

The Applicant gratefully acknowledges the indication of allowable subject matter in claims 10 and 11. However, the Applicant has opted not to place these claims in independent form because it is entitled to the broader scope of the independent claim from which they depend, for reasons discussed above.

References Cited But Not Relied On

After making a thorough review, the Applicant believes the embodiments of the present invention as claimed are patentably distinct over all the references of record. However, the Applicant respectfully traverses the Examiner's characterization of Shibuya '478 as disclosing an airstream stripper. The item 22 of Shibuya '478, like the load/unload cam 33 of Schirle '545 discussed above, does not extend into the data storage portion of the

disc adjacent the head path of movement. Rather, the item 22 of Shibuya '478 appears to be a disc snubber acting only against the disc in the outer guard band and would, like Schirle '545, create turbulence in the area of the head rather than attenuate the airflow as in the present embodiments as claimed.

Conclusion

This is a complete response to the Office Action mailed July 26, 2005. The Applicant respectfully requests that the Examiner withdraw the final rejection, reconsider the application and allow all of the pending claims. The Applicant has submitted herewith a request for telephone interview at a time to be determined by the Examiner if, after reviewing the amendments herein and before the next action on the merits, it is determined that all pending claims are not in condition for allowance. The telephone interview is necessary to address any unresolved issues preventing either the issuance of valuable patent rights or proceeding with an appeal.

Respectfully submitted,

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